

NEW SPECIES OF NOCTURNAL MOTHS OF THE GENUS CAMPOMETRA, AND NOTES.

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The genus *Campometra* was described in 1852 by Guenée,¹ and the sole species and therefore generic type, *amella*, was figured (Pl. XVIII, fig. 8). Mr. Grote never positively identified this species, although the picture is good and the markings are characteristic. In the Neumegen collection he did note, however, to a specimen of *Eubolina stylobata* a suggestion that it might be *C. amella*, and that proves to be correct without reasonable doubt. I have not seen the Guenée type, but both description and picture apply to *stylobata* and to nothing else. The type of *stylobata* I saw in the collection of the British Museum, and on direct comparison with the type of *Homoptera integerrima* Walker found the two identical.

The synonymy then seems to be fairly well established, as follows:

Campometra amella GUENÉE, Sp. Gen. Noct., III, 1852, p. 25, pl. xviii, fig. 8.

Homoptera integerrima WALKER, Cat. Brit. Mus., Het., XIII, 1857, p. 1057.

Homoptera stylobata HARVEY, Can. Ent., VIII, 1876, p. 155.

Eubolina stylobata GROTE, New List, 1882, p. 42.

The genus *Eubolina* was described by Harvey² for his species *impartialis*, described at the same time, and that is therefore the type of the genus. In 1882 Mr. Henry Edwards described *Eubolina meskei*, and in the same year Mr. Grote referred *Homoptera mima* Harvey to *Eubolina* in his New List; the genns thus containing four species, two of which its describer had not considered as referable to it when they were characterized by him.

E. impartialis differs in color and general appearance from the allied forms, and on the female, which only I have at hand, the middle tibiae are lengthily spinulated, the clothing close, the armature in a single series and very prominent.

Campometra amella has the legs all shorter and quite densely clothed with hair and scales, the middle tibiae with apparently a few scattered spinules. In the male there seem to be no sexual tuftings on this member.

¹ Spec. Gen. Noct., III, p. 25.

² Bull. Buff. Soc. Nat. Sci., II, 1875, p. 281.

Homoptera mima has the tibiae moderately clothed, not at all spinulated, in the male with distinct brush-like tufts of scales on the middle pair.

E. meskei is inaccessible to me at present writing, but its appearance is such that I would expect to find it in accord with the generic type, and to *impartialis* and *meskei* I would tentatively restrict the term *Eubolina*.¹

A close ally of *C. amella* in structure, size, and general type of maculation is:

CAMPOMETRA BILINEATA, new species.

Ground color umber brown, a little dusted with reddish. Head immaculate. Collar a little paler at base, tipped with steely blackish. Thoracic disk intermixed with similar deep blue-black scales, which also sprinkle the patagia and extend over the abdomen. Abdominal tuftings brown, gray scales becoming dominant at the sides and beneath. Primaries with clean, well-marked ornamentation. Basal line single, black, broken, accompanied by a brownish shade which breaks the otherwise solidly dark basal space, the tint being bluish black. Transverse anterior line single, upright, with a small outward bend just below the cell. Transverse posterior line single, red brown, irregularly crenulated, outcurved over the reniform, with a deep acute inward tooth in the submedian interspaces. Subterminal line incomplete, vaguely defined, white, slender, denticulate in the costal region, lost below that point except as it is marked by dusky clouds to vein 2, below which it is brown and slender to the margin. A broken blackish transverse line just before the margin. Just within the center of the wing are two upright, slightly wavy, prominent black lines, just enough separated to avoid a band. The inner is somewhat narrower, sharper, and more intensely black, the outer broader and a little diffuse. Orbicular wanting in the specimen. Reniform large, irregularly oval, white, with narrow brown central lines. Secondaries a little more powdery and diffuse in ground color. A geminate black line at basal third, which does not reach either margin. A broad, dusky, submarginal shade, which is suffused with rusty reddish at its middle and terminates at the anal angle in a steely black spot. A broken, narrow, black terminal line and the fringes with a crenulated black interline. Beneath whitish, powdery, wings darkening outwardly. Primaries with an inner dusky band marked on the costa only, and an outer one which extends nearly half across the wing. Secondaries with an inner dusky band, which forms a lunule in the cell, a broken, diffuse, median shade and a submarginal clouding which forms a marked dusky patch above the anal angle.

Expands 1.75 inches=44 mm.

¹ Dr. Dyar informs me that the type of *meskei* is a male, has unarmed middle tibiae, and no sexual tuftings. On general color and wing form the two may yet be held together until more material gives us better basis for other action.

Type.—No. 4316, U.S.N.M.

Habitat.—Brownsville, Texas; June 10; Townsend, No. 544.

A single female specimen from the U. S. National Museum. The resemblance to *amella* in size, form, and general appearance is obvious; but the distinctive feature, the parallel black lines near the center of the wing, is equally prominent. A further difference is that in *amella* the subterminal line is well defined, angulated and prominent, while in the new species this line is practically obsolete. It should be added to the description that an irregularly waved, somewhat diffuse bluish black band runs through the subterminal space and crosses the subterminal line at its inception on the costa.

CAMPOMETRA CINCTIPALPIS, new species.

Ground color a deep purplish red-brown, the primaries with elevated black, squamose vestiture that gives a velvety appearance. Front with a pale yellowish, transverse band, a pale tuft at base of each antenna, and the palpi pale banded. Thorax purplish without defined markings. Primaries with an intermingling of pale and yellowish scales that gives a somewhat mossy appearance and obscures the ordinary maculation. Basal line faintly traceable by black scales. Transverse anterior line upright, blackish, a little wavy, preceded by a purplish shade which is itself limited by a darker brown, diffuse, shading; followed by a mossy brown shade line. A narrow, black, irregular median line of elevated scales. Transverse posterior line narrow, black, irregularly waved and toothed, squarely exserted over the reniform and almost as squarely inset beneath it; followed at some distance by a broader, less defined, and more even brown shading. Subterminal line distinct, pale, irregularly but not greatly sinuated. Orbicular small, round, incompletely and obscurely brown ringed and with a brown central dot. Reniform not defined, marked by a small upper and larger lower white spot, the two connected by a narrow, white line. Secondaries uniform smoky brown, the fringes with a pale interline. Beneath, primaries smoky, powdery, with a partial extramedian transverse line. Secondaries whitish, powdery at base, with a brown discal spot and a crenulated brown median line, beyond which the wing is brown nearly to the margin, which is again whitish.

Expands 1.35 inches=34 mm.

Type.—No. 4315, U.S.N.M.

Habitat.—Cocoanut Grove, Florida; E. A. Schwarz.

A single defective female from the U. S. National Museum. The apices of both wings are rubbed and broken, but the specimen is otherwise very fair, all the markings being discernible on one side or the other. It is the darkest species of the genus and has no contrasts in maculation. The immaculate secondaries will further serve to differentiate it from the other described forms. The middle tibia seems to have no obvious spinose armature, but has a central ring tuft of scales.

CAMPOMETRA MIMA Harvey.

The most common of the species, and as they run, very sharply defined. The transverse anterior line is geminate, both defining lines black, rather widely separated, the intervening space dusky so as to form an evenly outcurved dusky band. The transverse posterior line is also black, well marked, and squarely exserted beyond the reniform. A yellowish or reddish brown shade lightens the wing and dominates the impression gained by an ordinary examination of the species.

The middle tibiae are unarmed and in the male have a very heavy scale tuft; but there are no hair pencils.

Twenty specimens are under examination: San Diego, Texas, April 26, May 25; Bastrop County, and other Texan localities; Florence, Tucson, Catalina Springs April 11, Oracle, July 21, and other localities in Arizona. The tendency in the variation is to a more indistinct maculation.

CAMPOMETRA FRATERNA, new species.

Resembles *mima* in all essential characters and differs from that species in the powdery, uniform ashen gray primaries lacking the brownish shadings, and on which the maculation is only feebly written. The transverse anterior line shows no tendency to band and, while the other lines and shades of *mima* are all traceable, none are well marked. In the structure of the middle tibiae of the male the species is like its ally.

Type.—No. 4313, U.S.N.M.

I have six specimens, five of them females, from Death Valley (April), Oracle (July 7), and Catalina Springs (May 5), Arizona. All are from the U. S. National Museum, collected by Messrs. Koebele or Hubbard and Schwarz.

CAMPOMETRA MINOR, new species.

Smaller than *mima* throughout, few of the specimens exceeding and some not reaching 26 mm., or a trifle over 1 inch, the primaries even, powdery gray, none of the markings well written, though so far as traceable, similar to *mima*. It is a slighter, narrower winged form than *fraterna*, which equals *mima* in average size and has the primaries more squared. No male of this species has been available. Of the five females four are from the Hulst collection, probably taken near Tucson Arizona, and one is from Catalina Springs (April 11), taken by Mr. Schwarz. The latter has a white shading over the reniform, extending beyond the transverse posterior line almost to the subterminal line, the edges of this shade being indefinite. The smoky margin of the secondaries is narrower than in the allied forms and there is less tendency to a banding.

Type.—No. 4314, U.S.N.M.

Altogether the species are left in a somewhat unsatisfactory condition. *Amella*, *bilineata*, and *cinctipalpis* are probably congeneric and, except for a doubt about the armature of *cinctipalpis*, are strictly referable to *Campometra*.

Mima, *fraterna*, and *minor* are close allies, yet I think, distinct, and they differ from *Campometra* in the totally unarmed middle tibia, which in the male is very heavily clothed with long scales forming a real tufting. I prefer leaving them with *Campometra* temporarily, until all the allied genera can be carefully studied, but suggest the term *Heteranassa* in case generic separation seems desirable.